

Hematopoiesis

²⁰¹⁵ 4- Wrong about granulopoiesis – peripheral blood count of neutrophils is an absolute measure of their total count

²⁰¹⁸ 7-One of the following statements about the blood is NOT true:

- a. The percentage (%) of the fetal hemoglobin in the adult RBC is normally about 1-2%.
- b. The percentage (%) of the reticulocyte cells in the bone marrow and peripheral blood is equally distributed.
- c. The bone marrow begins to produce blood cells not from the very early months of the fetal life.
- d. The fetal hemoglobin is present in every RBC in the blood.
- e. The reticulocyte cells are present in the bone marrow and peripheral blood.

ANS: B

²⁰¹⁸ 8-One of the following about erythropoiesis is NOT true?

- a. All the different forms of blood cells are produced at the same time in the fetus from the first month.
- b. Even trace elements (copper, cobalt) play a role in normal erythropoiesis.
- c. The main hormone that plays a role in erythropoiesis is erythropoietin.
- d. Erythropoietin is produced by the kidneys and other organ(s).

e. In the adult the highest erythropoiesis occurs in the vertebrae and pelvis.

ANS: A

23- Erythrocytes, Choose the WRONG statement:

- a. Eosinophilia of erythrocytes is due to hemoglobin.
- b. About one week is needed for the formation of erythrocytes from proerythroblasts.
- c. Erythrocytes appear electron dense and homogenous under TEM.
- d. Rouleaux formation is a reversible condition due to surface tension caused by erythrocytes biconcave surface in slow circulation.
- e. Mature erythrocytes are still capable of producing a little amount of hemoglobin.

ANS: E

25- The precursor cells of granulocytes are destroyed by radiotherapy. To reestablish the granulocytic lineage, which of the following cells should be transplanted?

- a. Promyelocytes.
- b. Metamyelocytes.
- c. Promonocytes.
- d. Band cells.
- e. Myelocytes.

ANS: A

27- Regarding granulopoiesis, choose the WRONG statement

- a. Azurophilic granules first appear at the promyelocyte stage.
- b. Secondary granules first appear at the myelocyte stage.
- c. Metamyelocytes have kidney shaped nuclei and cannot

divide.

d. Both types of granules in granulopoietic cells are synthesized by the free ribosomes.

e. Band cells are almost mature granulocytes but without segmented nuclei.

ANS: D

2018

30-Reticulocytes, choose the CORRECT statement:

a. Their percentage in peripheral blood is not changed in hemorrhage.

b. Contain remnants of DNA.

c. Contain acidophilic reticulum of polyribosomes

d. Have the same size as mature erythrocytes.

e. They are stained with Brilliant cresyl blue. Have the same size as mature erythrocytes.

e. They are stained with Brilliant cresyl blue

ANS: E

2017

11- Which of the following is wrong about reticulocytes?

a. Contain DNA not RNA

b. increases in hemolytic anemia

c. can synthesize heme

answer: a

2017

18-Which of the following is NOT true of neutrophilia ?

a. Neutrophilia is not always associated with an increased production of neutrophils

b. Apparent neutrophilia results in the migration of neutrophils from the marginating compartment to the

circulating one .

c. Intense muscular exercise increases the number of neutrophils for many days .

d. Band cells and metamyelocytes can be seen sometimes in certain bacterial infections

e. Glucocorticoids increase the mitotic activity and result in increased production of neutrophils

answer :c

2017
19- Which of the following is wrong about neutrophil?

a. peripheral blood count of neutrophils is an absolute measure of their total count

b. Barr body appears in females

c. Its primary granules contain myeloperoxidase

answer :a

2017
23-Which of the following cells increase in level during parasitic infections ?

a. Neutrophils

b. Basophils

c. Eosinophils

d. Lymphocytes

e. Monocytes

answer: c

2017
26-Removal of the old and aged erythrocytes from the circulation :

a. Is due to the dilated endothelium and large pores in the lining of the sinusoids of the spleen

b. Takes place in the marginal zone sinuses

- c. Occurs in the lymph node
- d. Is the function of splenic cords
- e. A + B

answer: a

2017
29-Which of the following cells have granules containing peroxidase and histaminase?

- a. neutrophils
- b. basophils
- c. eosinophils

answer : c

2017
33-We recognize myelocytes from:

- a. specific granules
- b. Primary granules
- c. size

answer : a

2017
34-Which of the following is false?

- a. monocytes have kidney shaped nucleus
- b. 5-lobed-nucleus neutrophils are less mature than 4-lobed ones
- c. B and T lymphocytes cannot be distinguished under LM

answer : b

2017
13-Which of the following is wrong?

- a. Nucleus is eccentric in promyelocyte

b. In Myelocyte phase, specific granules start to appear

c. In promyelocyte phase, primary granules appear

answer :a

2019

11) wrong about reticulocytes

A- Contain DNA not RNA B- increases in hemolytic anemia

C- can synthesize heme

ANS: A

2019

Q16. cell with the same size of erythrocyte and blue cytoplasm with large nucleus?

Answer: lymphocyte

2019

Q17. Which one of the following is a correct pair?

Answer: Basophil / Histamine

2019

Q21. In parasitic infection which of the following increases:

Answer: Cells with acidophilic granular bilobular nucleus

019

Q27. Which statement is wrong about granulopoiesis?

Answer: Precursors have lobulated nucleus

019

Q33. Choose the wrong statement:

Answer: Granulocytes have irregular shape in blood, and a spherical shape in connective tissue

019

Q36. Choose the wrong statement:

A. All iron is absorbed in the duodenum

B. Men have lower iron than women

Answer: B

019

Q38. Choose the wrong statement:

Answer: Erythrocyte contains granules

019 Q40. What can be found inside the red bone marrow?

Answer: Hematopoietic stem cells + sinusoidal capillaries + reticular tissue

019 5) Which of the following is wrong about reticulocytes?

- a. Contain DNA not RNA
- b. increases in hemolytic anemia
- c. can synthesize heme

ANS: A

019 12) Which of the following is correct about monocytes?

- a. They are phagocytic cells
- b. They increase dramatically in parasitic infections
- c. They are responsible for allergic reactions

ANS: A

019 14) Which of the following is false?

- a. monocytes have kidney shaped nucleus
- b. 5-lobed-nucleus neutrophils are less mature than 4-lobed ones
- c. B and T lymphocytes cannot be distinguished under LM

ANS: B

019 18) Wrong about monocyte:

- a. pink
- b. it has azurophlic granules
- c. neutrophil most abundant in plasma

ANS: A

2019 21) True about monocytes

- a. multinucleated cell
- b. frosted glass appearance
- c. nucleus is masked by granules

ANS: B

2019 24) Erythrocytes, Choose the WRONG statement:

- a. Eosinophilia of erythrocytes is due to hemoglobin.
- b. About one week is needed for the formation of erythrocytes from proerythroblasts.
- c. Erythrocytes appear electron dense and homogenous under TEM.
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- e. Mature erythrocytes are still capable of producing a little amount of hemoglobin

ANS: E

2019
25) Thrombocytes, choose the WRONG statement:

- a. Microtubules and microfilaments are found in the outer marginal bundle.
- b. Have thick glycocalyx.
- c. Originate from bone marrow cells with many dynamic cell projections.
- d. Often form basophilic clumps in histological preparations.
- e. Lambda granules contain serotonin

ANS: E